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Feeder Calf Production and Marketing Patterns Southeast Ohio

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ABSTRACT

The number of calves born and number of calf producers in Southeast Ohio in 1972 is determined, based upon secondary information. The characteristics of calf production, disposition and marketing are delineated, based upon the results of a survey of dairy and beef cattle producers. Resulting data show that 210,536 calves were born on 16,516 farms in this area in 1972. Of these, 60 percent are sold as calves and 65 percent of those sold entered the feeder calf market. Spring calving and fall marketing are the dominant practices, although the seasonal pattern varies somewhat by type of farm. Auction markets account for 86 percent of all feeder calves marketed, however, the average volume sold at existing markets may not be sufficient for efficient and competitive price discovery.

Keywords

Feeder Cattle, Marketing, Auctions, Southeast Ohio, Calves.

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FEEDER CALF PRODUCTION AND MARKETING PATTERNS: SOUTHEAST OHIO

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Highlights and Implications

The production of feeder cattle is an activity that appears to be relatively well suited to Southeast Ohio. The 28 counties in this area compose about 30 percent of the land area in the state and account for about 40 percent of the beef brood cows. About 60 percent of all calves born on cattle farms in the area are marketed as feeder calves, making feeder calf supply the primary enterprise on these farms. Additionally, about 15 percent of the calves born on dairy farms in the area are sold as feeder cattle, bringing the total supply of feeders sold from all farms in Southeast Ohio to over 90,000 head in 1972. Of this total, about 87 percent were produced on cattle farms and the remaining 13 percent on dairy farms.

Almost all of the feeder calves produced on cattle farms were beef breeds, whereas about 33 percent of the calves sold as feeders from dairy herds were dairy-beef crossbreds. To the extent that dairy-beef crosses generate greater returns to the calves sold as feeders by dairymen, greater use of beef sires in dairy herds may be warranted. The results of this investigation suggest that the economic rewards associated with various breeding strategies needs further study.

Most cow-calf enterprises in the area are small. On the average only 12.7 calves are born per year per farm. There is a large number of small, part time cattle farms with operators employed in off-farm occupations. There are also several medium sized cow-calf operations (50-99 head). Typically, these are enterprises on full-time farms where cattle feeding appears to be a companion enterprise. A few large sized cattle farms (100 head or more) exist in the area. These are generally full-time farming operations specializing in the cow-calf enterprise.

Spring calving and fall marketing are dominant practices in the area. Larger operators are doing a substantially better job of breeding for spring calving than are small farmers. To the extent that spring calving is a desirable pattern, significant improvement can be made in breeding practices on the smaller, part time cattle farms. In general, the better management practices appear to be closely associated with the larger farm units.

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Auction markets are the most popular method for selling feeder calves in the area, accounting for about 86 percent of total sales. This probably reflects the impact of the small average size of the sellers, as it is difficult for a buyer to acquire enough calves for efficient shipment to distant feedlots unless calves are co-mingled. Auction markets facilitate such co-mingling.

The auction market is clearly the type of market that the producers accept. There is little evidence that any sizeable number of producers are being sought out by professional feeder calf buyers. Again, this may reflect the influence of the small average size of producers which could discourage direct buyers from attempting to seek out the few relatively large producers due to the small total number of calves that could be purchased in that manner.

There are 16 auction markets in the area that handle feeder cattle. On the average, somewhat fewer than 5000 head of feeders annually are handled at each of these, although the actual volume through individual markets appears to range from less than 2000 head to 20,000 or more.

The low volume sold through some auctions may not be large enough to attract sufficient buyers to create competitive bidding and a representative price discovery process. Concentration of feeder calf sales in the fall may lessen the magnitude of this problem. Nevertheless, it appears to be one of the potentially more serious marketing problems. For example, about 70 percent of all feeder calves are sold in October and November. Markets have an average weekly volume of about 350 head during that period, and the smaller markets realize less than half that number. If each buyer purchased only one truckload per week during that period, the average market would attract only 4 or 5 buyers and the smaller markets about 2. Thus, competitive pricing is not likely to result in many markets, even during the peak fall sales period.

Concentrated fall marketings may be creating some additional marketing problems. The potential for inefficiencies in the use of buildings, communications and transportation facilities is evident. A more serious problem, however, may stem from the absence of buyers at markets in the area other than in the autumn. Larger producers market a significant share of their calves in the spring. The number of calves that they sell in the spring is large enough to suggest that this is by design and probably reflects some price advantage. The large producers may realize such a price advantage due to their access to direct buyers. However, because not many calves in total are being sold in the spring, most buyers probably are not attending the spring auctions. This would diminish the bidding competition at the spring sales, reducing the likelihood that higher spring prices are being reflected to sellers in these auctions. Thus, any real economic advantage that exists for spring marketed feeder cattle may not be available to most producers in the area, providing reduced incentives for spring marketings and lower returns to producers.

Introduction

An adequate supply of feeder cattle is essential for continued growth in beef production. Expanded beef production over the long run is being mandated worldwide by strong consumer demand for high quality protein foods, particularly red meats. Production of feeder calves appears to be an enterprise for which Southeast Ohio (Figure 1) is relatively well suited. Under proper management, the rolling land in this area should provide sufficient pasture and forage production for viable cow-calf enterprises.

Southeast Ohio may have a comparative economic advantage, or the smallest comparative disadvantage, in feeder calf production relative to other parts of the Corn Belt. That is, agricultural resources apparently can be used more profitably for producing cash grains and slaughter livestock in other corn belt areas. Production statistics imply that farmers in Southeast Ohio may be currently exploiting this relative advantage to some extent. For example, this region accounts for about 32 percent of Ohio's land area. On January 1, 1972, there were 390,000 beef brood cows reported in Ohio. Of these, 39 percent were on farms located in the 28 Southeast Ohio counties. 1/ In other words, 32 percent of Ohio's land area accounted for about 40 percent of the state's beef cow herd.

Further development of feeder calf production in this area can help to assure the supply of feeder cattle necessary for orderly growth of beef production. It can also assist this region in achieving its goals of economic growth and improved incomes. However, expanded production will result, regardless of the relative production advantage, only if viable markets exist. That is, a market mechanism must exist that will assure sellers access to buyers and allow producers to receive prices which accurately reflect their contribution to the red meat industry.

A study was initiated to determine the requirements of the marketing system for feeder cattle in Southeast Ohio that are necessary to promote growth in feeder calf production consistent with the area's potential. Four objectives were delineated:

1. Develop a profile on calf production in Southeast Ohio, including numbers produced, seasonal calving patterns, size of production units, breeding practices of calf producers and the general characteristics of production enterprises.

1/ Ohio Agricultural Statistics, 1972.

Marketing alternatives that would generate increased competition among buyers, both in the autumn and spring, would appear to have high potential. Furthermore, the importance of auctions for marketing feeder calves in the area suggests that alternatives which include some aspects of the auction method of selling would most likely find acceptance in this industry.

Dairy farmers in Southeast Ohio sell almost 55 percent of the calves born on their farms. These account for almost one third of all calves sold in the area. Most of these (67.5 percent), however, are sold for veal, not as feeder cattle. This implies that most dairymen sell their calves within a few weeks of birth. Given the relatively large number of such calves (about 28,000 in 1972), a specialized calf raising enterprise that would feed calves from normal vealer weights up to weights suitable for placement in feedlots may be a potential addition to the feeder cattle industry in this area. This is not to suggest that the sale of calves at normal veal weights from dairy herds is less than the most profitable strategy for dairymen, but that the potential supply of feeder cattle could be expanded if specialized calf raising enterprises were established.

FIGURE 1. GEOGRAPHICAL DEFINITION OF SOUTHEAST OHIO

2. Determine the disposition of calves born on farms in the area, including the number used for breeding, dairy production, herd replacement, and sale.

3. Delineate the seasonal sales patterns and methods used for marketing calves that are sold as feeder cattle from farms in Southeast Ohio.

4. Diagnose problems that exist in the current marketing and market-related production practices for feeder calves that may impede the orderly expansion of this industry in Southeast Ohio.

Data available from secondary sources on feeder calf production and marketing have not given a clear picture of these activities in the past. Therefore, a survey was implemented in order to secure an improved data base.[2/] Both beef cattle and dairy farms are included in this analysis as both are potential sources of feeder cattle. This publication reports the results of the survey, including data on the number of calves produced on Southeast Ohio cattle and dairy farms, genetic background of calves produced, seasonal and geographic production patterns, disposition of calves, and, for calves sold as feeder cattle, seasonal marketing patterns and methods of marketing. Additionally, area-wide indices are reported for each of the above categories for cattle farms (Table 1) and dairy farms (Table 2) distributed by size of farm.

Calf Production

In 1972 over 210,500 calves were born on farms in the 28 county area. Of these, 134,618 were produced on cattle farms and 75,918 on dairy farms (Table 3). Production is most heavily concentrated in two areas: East Central, including the large dairy counties of Holmes and Tuscarawas plus Coshocton, Guernsey and Muskingum counties where cattle farms predominate; and Southwest, including Adams, Brown, Highland and Ross counties where cattle farms also predominate. These nine counties account for slightly over 52 percent of the total calf production in the area.

The size of calf-producing enterprises in the area is small in terms of annual calf production (Table 3), averaging 12.7 calves per farm. There is a wide distribution in average sizes among the counties, however, ranging from a low of 7.8 calves per farm in Clermont County to a high of 21.2 in Jackson County. Overall, the largest farms appear to be concentrated most heavily in the southwestern part of the region including Jackson, Ross, Highland, Pike, Vinton and Adams counties.

2/ Methodology and procedures for this survey are detailed in the appendix.

TABLE 1. INDICES OF CALF PRODUCTION AND DISPOSITION

CATTLE FARMS IN 28 SOUTHEAST OHIO COUNTIES

	Index for Total Population (%)	Indices for Respondents by Size Calves per Farm 1-19 (%)	20-49 (%)	50-99 (%)	100+ (%)
Total Production	100.00	100.00	100.00	100.00	100.00
Calving(By Month):					
January	6.63	9.65	7.46	0.91	1.23
February	16.47	14.67	21.88	11.34	4.24
March	29.26	24.90	25.06	35.46	59.42
April	20.67	18.53	21.03	25.42	17.50
May	11.77	15.64	8.31	12.26	13.71
June	5.60	5.79	7.21	3.00	1.12
July	2.23	2.90	2.20	1.70	0.22
August	2.60	3.09	2.32	3.78	**
September	2.47	3.28	1.96	3.00	0.45
October	1.50	0.39	2.20	1.70	1.78
November	0.33	**	0.36	0.91	0.33
December	0.47	1.16	**	0.52	**
Disposition:	100.00	100.00	100.00	100.00	100.00
Kept on Farm	36.00	35.13	28.12	55.93	42.25
Sold	64.00	64.87	71.88	44.07	57.75
Of Those Kept on Farm:	100.00	100.00	100.00	100.00	100.00
Kept for Feeding	54.25	37.92	46.94	80.54	70.27
Kept for Breeding	45.75	62.08	53.06	19.46	29.73
Of Those Sold:	100.00	100.00	100.00	100.00	100.00
Sold As Veal	4.95	9.23	3.57	0.89	**
Sold As Feeders	91.04	83.33	93.20	99.11	100.00
Sold As Breeding Stock	1.77	5.36	**	**	**
Sold as Slaughter Cattle	2.24	2.08	3.23	**	**
Calves Sold, by Type:	100.00	100.00	100.00	100.00	100.00
Beef	97.34	93.45	100.00	100.00	92.86
Dairy	0.89	2.68	**	**	**
Beef-Dairy Crosses	1.77	3.87	**	**	7.14
Calves Sold, by Market Method	100.00	100.00	100.00	100.00	100.00
Through Auction	88.33	80.36	80.29	100.00	93.63
Direct to Feeders	7.78	13.57	10.95	**	6.37
Through Dealers	1.77	1.79	4.56	**	**
Other	2.12	4.28	4.20	**	**

TABLE 1. INDICES OF CALF PRODUCTION AND DISPOSITION

CATTLE FARMS IN 28 SOUTHEAST OHIO COUNTIES

(Continued)

	Index for Total Population (%)	Indices for Respondents by Size — Calves per Farm			
		1-19 (%)	20-49 (%)	50-99 (%)	100+ (%)
Month Calves Sold:					
January	1.03	**	2.01	**	**
February	0.46	**	0.91	**	**
March	1.20	3.93	**	**	**
April	7.21	3.93	4.56	16.42	23.55
May	2.92	**	5.84	**	**
June	1.14	**	**	**	15.44
July	**	**	**	**	**
August	2.17	**	4.20	0.60	**
September	3.43	9.29	0.72	1.19	0.77
October	51.72	53.92	56.02	25.08	56.95
November	22.14	21.07	17.70	55.52	2.32
December	6.58	7.86	8.03	1.19	0.97

**Survey responses and/or population base did not include significant data.

TABLE 2. INDICES OF CALF PRODUCTION AND DISPOSITION
DAIRY FARMS IN 28 SOUTHEAST OHIO COUNTIES

	Index for Total Population	Indices for Respondents by Size Calves per Farm			
	(%)	1-19 (%)	20-49 (%)	50-99 (%)	100+ (%)
Total Production	100.00	100.00	100.00	100.00	100.00
Calving,(By Month):					
January	11.09	10.54	11.40	11.82	9.26
February	8.66	9.86	8.32	7.89	5.56
March	13.39	15.02	14.48	7.89	7.41
April	12.87	23.77	7.55	7.89	5.56
May	6.29	9.19	4.16	7.39	3.70
June	4.15	4.04	3.70	5.91	3.70
July	4.29	3.36	4.16	7.39	1.85
August	8.57	4.04	9.55	15.28	9.26
September	9.77	6.95	12.33	7.39	11.11
October	8.50	5.83	9.40	7.89	20.37
November	6.21	4.04	7.55	5.42	11.11
December	6.21	3.36	7.40	7.39	11.11
Disposition:	100.00	100.00	100.00	100.00	100.00
Kept on Farm	45.93	35.43	47.00	61.08	62.96
Sold	54.07	64.57	53.00	38.92	37.04
Of Those Kept on Farm:	100.00	100.00	100.00	100.00	100.00
Kept for Feeding	31.40	41.12	24.60	29.85	53.17
Kept for Production and Breeding	69.60	58.88	75.40	70.15	46.83
Of Those Sold:	100.00	100.00	100.00	100.00	100.00
Sold as Veal	67.44	76.82	59.02	73.07	55.00
Sold as Feeders	28.45	19.72	35.17	26.93	45.00
Sold as Breeding Stock	4.11	3.46	5.81	**	**
Calves Sold, By Type:	100.00	100.00	100.00	100.00	100.00
Dairy	67.58	76.82	53.49	93.59	75.00
Beef-Dairy Crosses	32.42	23.18	46.51	6.41	25.00
Calves Sold, By Market Method:	100.00	100.00	100.00	100.00	100.00
Through Auction	68.75	75.20	100.00	56.00	45.61
Direct to Feeders	17.31	12.40	**	**	36.84
Through Dealers	1.92	**	**	44.00	**
Other	12.02	12.40	**	**	17.55

TABLE 2. INDICES OF CALF PRODUCTION AND DISPOSITION DAIRY FARMS IN 28 SOUTHEAST OHIO COUNTIES

(Continued)

	Index for Total Population	Indices for Respondents by Size Calves per Farm			
	(%)	1-19 (%)	20-49 (%)	50-99 (%)	100+ (%)
Month Calves Sold:	100.00	100.00	100.00	100.00	100.00
January	10.58	22.81	4.96	14.29	**
February	10.58	10.53	7.47	9.52	55.56
March	3.37	**	5.79	**	**
April	2.40	**	2.30	9.52	**
May	**	**	**	**	**
June	1.92	**	3.33	**	**
July	.96	**	.85	4.76	**
August	**	**	**	**	**
September	15.38	8.77	18.18	14.29	22.22
October	27.40	26.32	29.75	23.81	11.11
November	14.90	17.53	14.05	14.29	11.11
December	12.51	14.04	13.32	9.52	11.11

**Survey responses and/or population base did not include significant data.

TABLE 3. CALF PRODUCTION IN SOUTHEAST OHIO, 1972

County	Calves Born on Farms, By Type			Number of Producers[1]	Average # of Calves Born/Farm
	Cattle	Dairy	Total		
Total	134,618	75,918	210,536	16,516	12.7
Adams	9,802	4,310	14,112	926	15.2
Athens	3,048	1,890	4,938	429	11.5
Belmont	3,656	3,928	7,584	632	12.0
Brown	7,621	4,101	11,722	1,114	10.5
Carroll	2,566	4,190	6,756	544	12.4
Clermont	3,654	1,298	4,952	631	7.8
Coshocton	6,019	4,501	10,520	730	14.4
Gallia	6,115	1,782	7,877	570	13.8
Guernsey	6,462	2,281	8,743	737	11.9
Harrison	2,929	1,491	4,420	385	11.5
Highland	11,319	5,405	16,724	978	17.1
Hocking	1,722	361	2,083	256	8.1
Holmes	3,000	12,650	15,650	1,128	13.9
Jackson	7,174	808	7,982	376	21.2
Jefferson	1,409	1,340	2,749	313	8.8
Lawrence	2,560	1,111	3,671	350	10.5
Meigs	2,803	2,114	4,917	456	10.8
Monroe	3,496	2,314	5,810	638	9.1
Morgan	4,604	1,272	5,876	473	12.4
Muskingum	6,756	2,627	9,383	832	11.3
Noble	4,333	1,219	5,552	511	10.9
Perry	4,742	1,155	5,897	465	12.7
Pike	4,196	752	4,948	308	16.1
Ross	10,616	1,669	12,285	615	20.0
Scioto	3,735	1,083	4,818	392	12.3
Tuscarawas	2,903	7,544	10,447	786	13.3
Vinton	2,533	590	3,123	197	15.9
Washington	4,845	2,131	6,976	744	9.4

[1]Includes all farms with cows and heifers that have calved.

Seasonal Calving Patterns

Spring calving is the dominant practice on cattle farms in the area (Figure 2, Tables 4 & 5). If the February-April period is the ideal calving time in the area, cow-calf operators appear to be doing a good job.

Dairymen apparently do not plan calf production for this same time period. This is probably due to differences in the nature of the two primary markets. Traditionally, the greatest demend in Ohio for feeder calves, the primary product of cow-calf operations, has been in the autumn. A late winter-early spring calving pattern allows cattle farmers to market 400-500 pound feeders during this peak demand period.

The primary product of dairymen, however, is milk which experiences its greatest demand and highest seasonal price from early fall to early spring. Therefore, fall calving allows dairymen to maximize milk production during this period of peak milk demand. The effect of calving dates on the marketability of calves sold as feeders from these dairy farms may be a secondary consideration.

To the extent that compressed spring calving is the optimum strategy on cattle farms, the larger producers seem to be doing a superior job (Table 1). For example, those cattle farms producing 100 or more calves had about 77 percent of their calves born in the 60 day March-April period compared to less than 45 percent for those producing fewer than 20 calves per year.

Likewise, the larger dairy farmers appear to be doing a superior job of calving relative to the milk market. Those dairymen with 100 or more calves per year average about 54 percent of all calves dropped in the September-December period, contrasting to about 20 percent for those with fewer than 20 calves (Table 2). It appears from this calving data that herds larger than 100 head have superior management in their livestock enterprise as compared to operators of smaller herds who probably spread time and management skills over several farm enterprises or off-farm jobs.

Among the smaller farms, cow-calf producers appear to be following the optimum calving strategy more closely than dairy operators. Actually, the calving pattern in small dairy herds resembles that in cow-calf operations more closely than in large dairy herds. This observation raises the possibility that smaller dairymen tend to plan calving dates more to optimize the value of the calf than to facilitate optimum milk production. The data (Table 2) indicate that small dairy farmers sell a significantly larger share of their calves than do their larger counterparts, further supporting this possibility.

FIGURE 2. MONTH CALVES BORN: SOUTHEAST OHIO, 1972

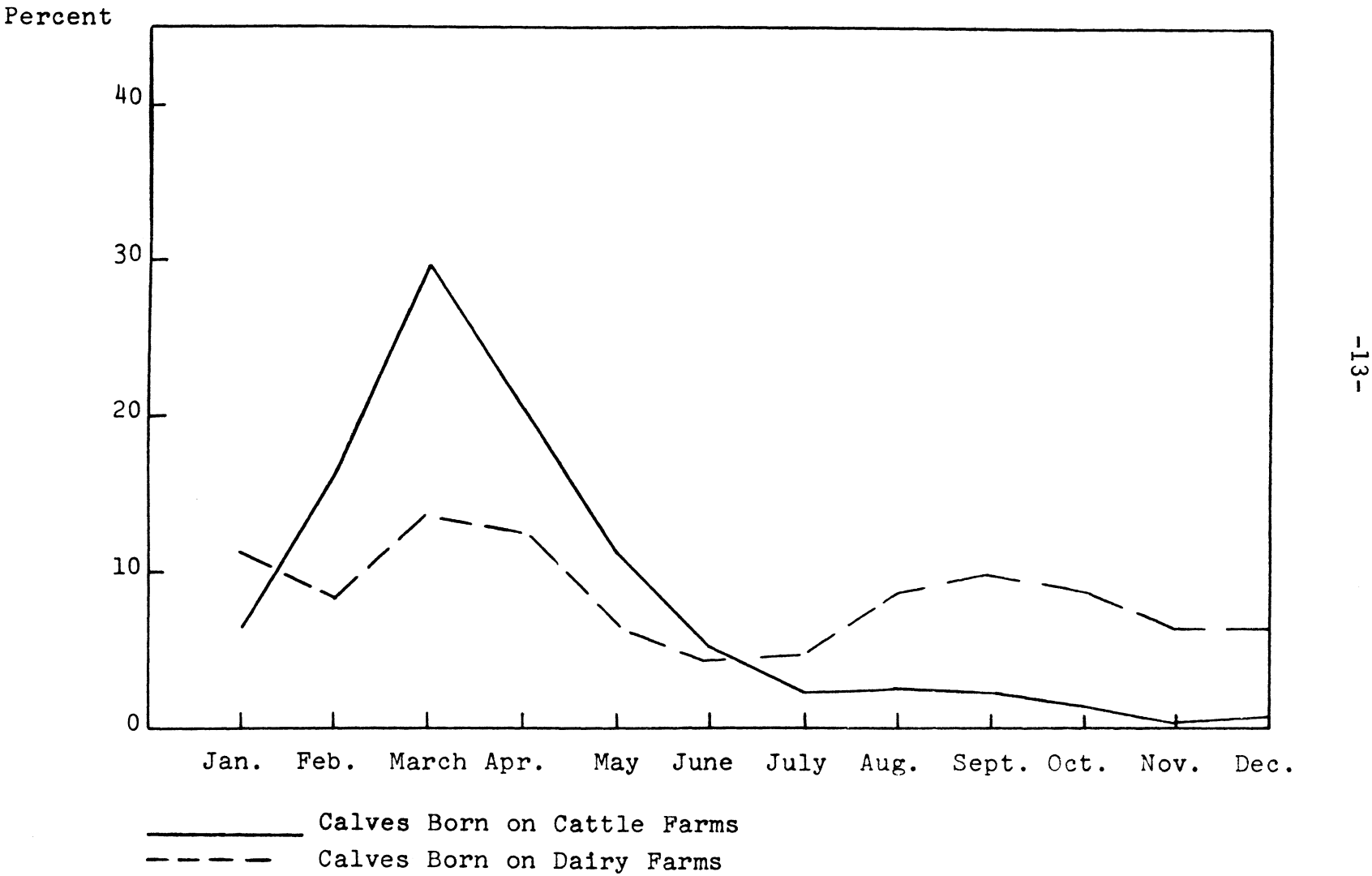

TABLE 4. CALF PRODUCTION ON SOUTHEAST OHIO CATTLE FARMS, 1972*

County	Calves Born--All Cattle Farms												
	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total	134,618	8,924	22,170	39,388	27,825	15,846	7,541	3,000	3,500	3,325	2,023	443	633
Adams	9,802	650	1,614	2,868	2,026	1,154	549	219	255	242	147	32	46
Athens	3,048	202	502	892	630	359	171	68	79	75	46	10	14
Belmont	3,656	242	602	1,070	756	430	205	82	95	90	55	12	17
Brown	7,621	505	1,255	2,230	1,575	897	427	170	198	188	115	25	36
Carroll	2,566	170	423	751	530	302	144	57	67	63	39	8	12
Clermont	3,654	242	602	1,069	755	430	205	82	95	90	55	12	17
Coshocton	6,019	399	991	1,761	1,244	709	337	134	157	149	90	20	28
Gallia	6,115	405	1,007	1,789	1,264	720	343	136	159	151	92	20	29
Guernsey	6,462	428	1,064	1,891	1,336	761	362	144	168	160	97	21	30
Harrison	2,929	194	482	857	606	345	164	65	76	72	44	10	14
Highland	11,319	751	1,864	3,312	2,340	1,332	634	252	294	280	170	37	53
Hocking	1,722	114	284	504	356	203	96	38	45	42	26	6	8
Holmes	3,000	199	494	878	620	353	168	67	78	74	45	10	14
Jackson	7,174	476	1,181	2,099	1,483	844	402	160	186	177	108	24	34
Jefferson	1,409	93	232	412	291	166	79	31	37	35	21	5	7
Lawrence	2,560	170	422	749	529	301	143	57	66	65	38	8	12
Meigs	2,803	186	462	820	579	330	157	63	73	69	42	9	13
Monroe	3,496	232	576	1,023	723	411	196	78	91	86	52	12	16
Morgan	4,604	305	758	1,347	952	542	258	102	120	114	69	15	22
Muskingum	6,756	448	1,113	1,977	1,396	795	378	151	176	167	101	22	32
Noble	4,333	287	714	1,268	896	510	243	96	113	107	65	14	20
Perry	4,742	315	781	1,387	980	558	266	106	123	117	71	16	22
Pike	4,196	278	691	1,228	867	494	235	93	109	104	63	14	20
Ross	10,616	704	1,748	3,106	2,194	1,250	595	237	276	262	159	35	50
Scioto	3,735	248	615	1,093	772	440	209	83	97	92	56	12	18
Tuscarawas	2,903	192	478	849	600	342	162	65	75	72	44	10	14
Vinton	2,533	168	417	741	524	298	142	56	66	63	38	8	12
Washington	4,845	321	798	1,417	1,001	570	271	108	126	119	75	16	23

*Distribution of County totals based upon area indices (Table 1).

TABLE 5. CALF PRODUCTION ON SOUTHEAST OHIO DAIRY FARMS, 1972*

County	CALVES BORN--ALL DAIRY FARMS												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total	75,918	8,418	6,575	10,162	9,768	4,777	3,154	3,260	6,505	7,418	6,454	4,713	4,714
Adams	4,310	477	373	577	555	271	180	185	369	421	366	268	268
Athens	1,890	210	164	253	242	118	79	81	162	184	161	117	117
Belmont	3,928	436	340	526	501	247	163	168	336	384	334	244	244
Brown	4,101	455	355	549	528	259	170	176	351	400	348	255	255
Carroll	4,190	465	363	561	540	264	173	180	359	409	356	260	260
Clermont	1,298	144	112	174	167	83	54	56	111	127	110	80	80
Coshocton	4,501	499	390	602	579	284	187	194	387	439	382	279	279
Gallia	1,782	198	154	238	229	112	74	77	153	174	151	111	111
Guernsey	2,281	253	198	305	293	143	95	98	195	223	194	142	142
Harrison	1,492	165	129	199	192	94	62	64	128	146	127	93	93
Highland	5,405	599	468	724	695	340	225	232	464	529	459	335	335
Hocking	361	40	31	48	46	23	15	16	32	36	30	22	22
Holmes	12,650	1,403	1,095	1,694	1,628	795	525	543	1,084	1,236	1,076	785	786
Jackson	808	90	70	108	105	51	33	35	69	79	68	50	50
Jefferson	1,340	149	116	179	173	85	55	57	115	131	114	83	83
Lawrence	1,111	123	96	149	143	69	47	48	95	108	95	69	69
Meigs	2,114	234	183	283	272	133	88	91	181	207	180	131	131
Monroe	2,314	257	200	310	297	145	96	99	198	227	197	144	144
Morgan	1,272	141	110	170	164	80	53	55	109	124	108	79	79
Muskingum	2,627	291	227	352	338	166	110	113	225	256	223	163	163
Noble	1,219	135	107	163	156	76	50	52	104	119	105	76	76
Perry	1,155	128	100	155	149	72	48	49	99	113	98	72	72
Pike	752	83	65	101	96	48	32	33	65	73	64	46	46
Ross	1,669	185	145	223	214	105	69	71	143	163	143	104	104
Scioto	1,083	120	94	145	139	68	45	46	93	107	92	67	67
Tuscarawas	7,544	837	653	1,010	970	474	313	324	646	738	641	469	469
Vinton	590	65	52	79	76	38	25	26	50	57	50	36	36
Washington	2,131	236	185	285	274	134	88	91	182	208	182	133	133

*Distribution of County totals based upon area indices (Table 2).

Disposition of Calves

Among all dairy farms, the larger the number of calves born, the greater the percentage of those calves that are kept on the farm (Table 2). Furthermore, a higher percentage of the calves held on these larger dairy farms are kept for feeding rather than for replacements, compared to the smaller dairy operations. This suggests that the larger dairy operations may have managerial capacity and other resources in excess of the needs of their dairy enterprise per se, resources that are directed to growing calves. These larger dairymen apparently find calf feeding to be a satisfactory alternative to expanded milk production. Most of the calves raised on these large dairy farms are apparently either eventually sold directly for slaughter or to feedlots for finishing prior to slaughter.

Among cattle operations, those in the intermediate size range (50-99 calves per year) tend to retain a significantly greater share of their calves on the farm than do the smaller or larger producers (Table 1). At the same time, more of the calves kept on these farms are fed out on the farm than is true for the smaller or larger units. This gives the impression that these farms typically include some grain production and are probably full time, mixed grain-livestock enterprises. Smaller cattle operations appear to be mostly part-time farms where the cow-calf enterprise is the predominant farming activity. The 100 plus head cattle operations appear to have some of the same characteristics as the 50-99 head group but apparently are more prone to be single enterprise cow-calf operations, selling a greater share of their calves as feeders.

Based upon this analysis, the most specialized calf producers appear to be the large full-time cow-calf enterprises and the small, part-time farms with brood cow herds. Small dairymen also produce calves in a manner consistent with the demand for feeder calves while calf production on intermediate-sized cattle operations and larger dairy farms tends to be a less dominant enterprise.

Additional detail is provided on the disposition of calves produced in Southeast Ohio (Figure 3 and Tables 6 and 7). About 60 percent of all calves are sold as calves while the remaining 40 percent are kept on the farm where they were born. Overall, a greater share are sold from cattle farms (64 percent) than from dairy farms (54 percent), reflecting the retention of replacement stock on the latter for milk production. In total, over 127,000 calves were sold from farms in this area during 1972. About two-thirds of these originated on cattle farms and the remainder on dairy farms. It is from this pool of calves that the commercial supply of feeder cattle is derived.

FIGURE 3. DISPOSITION OF CALVES PRODUCED IN SOUTHEAST OHIO

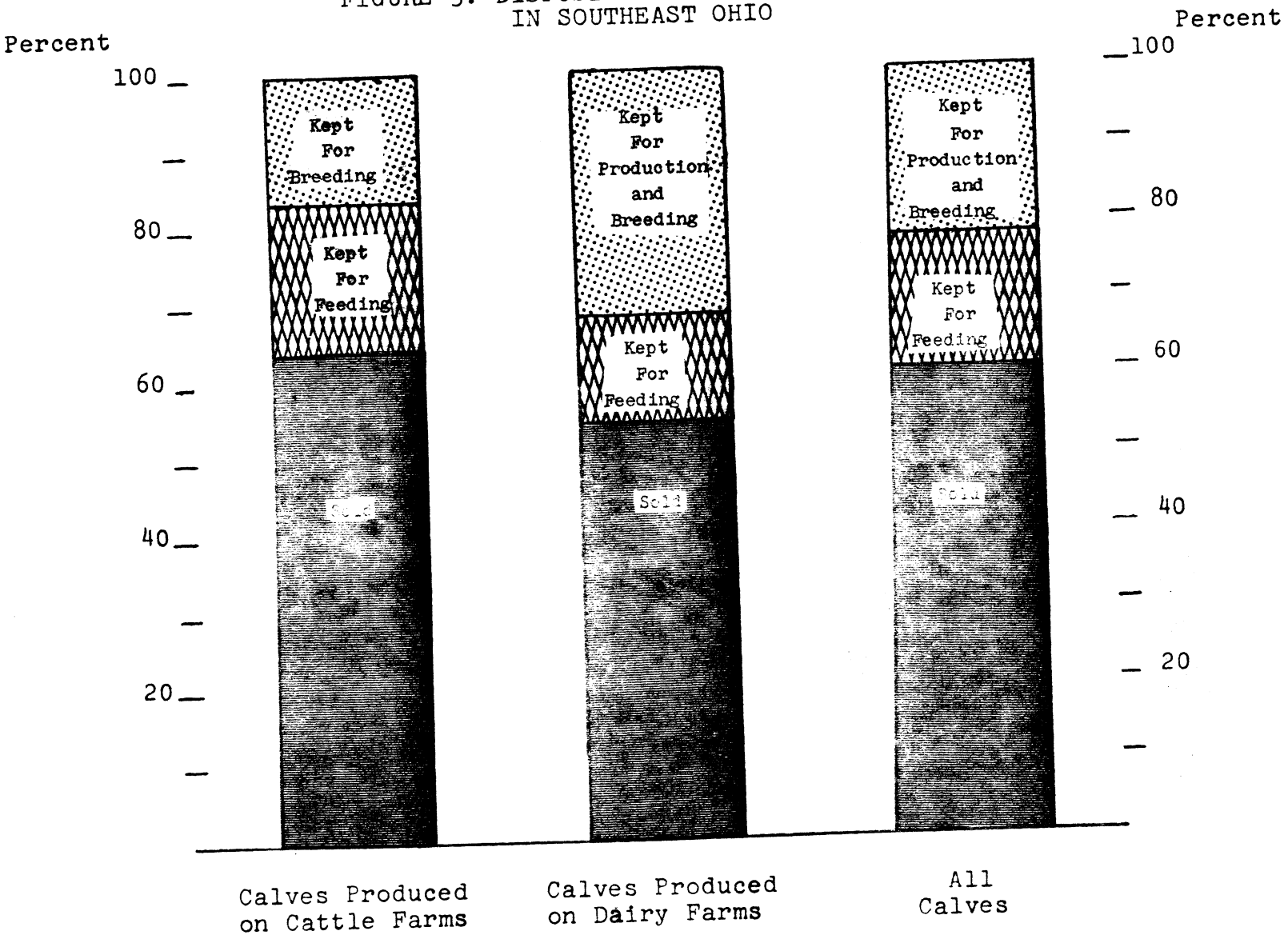

TABLE 6. DISPOSITION OF CALVES PRODUCED ON SOUTHEAST OHIO CATTLE FARMS, 1972*

County	Kept on Farm			Total Sold
	Total	For Feeding	For Breeding	
Total	48,463	26,290	22,173	86,155
Adams	3,529	1,914	1,615	6,273
Athens	1,097	595	502	1,951
Belmont	1,316	714	602	2,340
Brown	2,743	1,488	1,255	4,878
Carroll	924	501	423	1,642
Clermont	1,316	714	602	2,338
Coshocton	2,167	1,176	991	3,852
Gallia	2,201	1,194	1,007	3,914
Guernsey	2,326	1,262	1,064	4,136
Harrison	1,054	572	482	1,875
Highland	4,075	2,211	1,864	7,244
Hocking	620	336	284	1,102
Holmes	1,080	586	494	1,920
Jackson	2,583	1,401	1,182	4,591
Jefferson	507	275	232	902
Lawrence	922	500	422	1,638
Meigs	1,009	547	462	1,794
Monroe	1,259	683	576	2,237
Morgan	1,657	899	758	2,947
Muskingum	2,432	1,319	1,113	4,324
Noble	1,560	846	714	2,773
Perry	1,707	926	781	3,035
Pike	1,511	820	691	2,685
Ross	3,822	2,073	1,749	6,794
Scioto	1,345	730	615	2,390
Tuscarawas	1,045	567	478	1,858
Vinton	912	495	417	1,621
Washington	1,744	946	798	3,101

*Distribution of County totals based upon area indices (Table 1)

TABLE 7. DISPOSITION OF CALVES PRODUCED ON SOUTHEAST OHIO DAIRY FARMS, 1972*

County	Kept on Farm			Total Sold
	Total	For Feeding	For Production & Breeding	
Total	34,869	10,947	23,922	41,049
Adams	1,980	622	1,358	2,330
Athens	869	273	596	1,021
Belmont	1,904	566	1,238	2,124
Brown	1,883	591	1,292	2,218
Carroll	1,924	604	1,320	2,266
Clermont	596	187	409	702
Coshocton	2,067	649	1,418	2,434
Gallia	819	257	562	963
Guernsey	1,048	329	719	1,233
Harrison	685	215	470	807
Highland	2,482	779	1,703	2,923
Hocking	165	52	113	196
Holmes	5,811	1,824	3,987	6,839
Jackson	372	117	255	436
Jefferson	615	193	422	725
Lawrence	510	160	350	601
Meigs	971	305	666	1,143
Monroe	1,063	334	729	1,251
Morgan	584	183	401	688
Muskingum	1,207	379	828	1,420
Noble	560	176	384	659
Perry	531	167	364	624
Pike	345	108	237	407
Ross	767	241	526	902
Scioto	497	156	341	586
Tuscarawas	3,465	1,088	2,377	4,079
Vinton	271	85	186	319
Washington	978	307	671	1,153

*Distribution of County totals based upon area indices (Table 2)

Marketing Patterns

Calves sold from area farms are used for several purposes. Chief amoung these are as feeder cattle and for veal, with a small portion sold as breeding stock. However, distinctly different use patterns are evident among calves sold by type of farm operation (Figure 4 and Tables 8 and 9).

The majority of calves sold from cattle farms (91 percent) are sold as feeder cattle whereas most of those sold by dairymen (67.5 percent) are sold for the veal market. Only about 28 percent of the calves marketed from dairy farms are sold as feeder stock while about 5 percent of the calves from cattle herds enter the veal market.

These findings are consistent with the different nature of the two enterprises. In cow-calf operations the brood cows typically nurse calves to weights suitable for marketing as feeder stock whereas calves in dairy herds are generally weaned shortly after birth. Thus, supplemental feeding is required if calves on dairy farms are held beyond veal weights for sale as feeders or other uses. Apparently, most dairymen don't find such supplemental feeding to be a feasible or profitable activity. Large dairy operations appear to be an exception, however, as this group (100 or more calves per year) has a significantly larger share of their calves sold as feeder calves than do their smaller counterparts. These large dairy operators, therefore, apparently find it feasible not only to raise a significantly larger share of their calves for breeding stock, production and/or feeding, but also to feed to heavier weights the calves that they do sell.

Overall, more than 90,000 calves were sold from these cattle and dairy farms as feeder stock in 1972 (Tables 8 and 9). These accounted for 71 percent of all calves sold and about 43 percent of all calves produced. This indicates that the primary purpose of calf production in this area is for sale as feeder calves. Of the feeder calves sold, the greatest share (87 percent) originate on cattle farms. Most of the remaining calves that were sold (25 percent) were sold for veal. About 87 percent of the veal calves originate on dairy farms. Production of calves for these two markets is, therefore, highly specialized.

Genetic Characteristics of Calves Sold

The genetic background of calves sold is a valuable indicator of the suitability of these calves for the end use to which they are put. Genetic patterns (Figure 5 and Tables 10 and 11) closely parallel expectations, that is, calves sold from cattle farms are predominantly beef breeds while those sold from dairy farms are largely dairy breeds. However, a significant portion (about 33 percent) of those calves sold by dairymen are dairy-beef crosses whereas fewer than 3 percent of the calves from cattle farms are dairy or dairy-beef.

FIGURE 4. DISPOSITION OF CALVES SOLD FROM SOUTHEAST OHIO CATTLE AND DAIRY FARMS

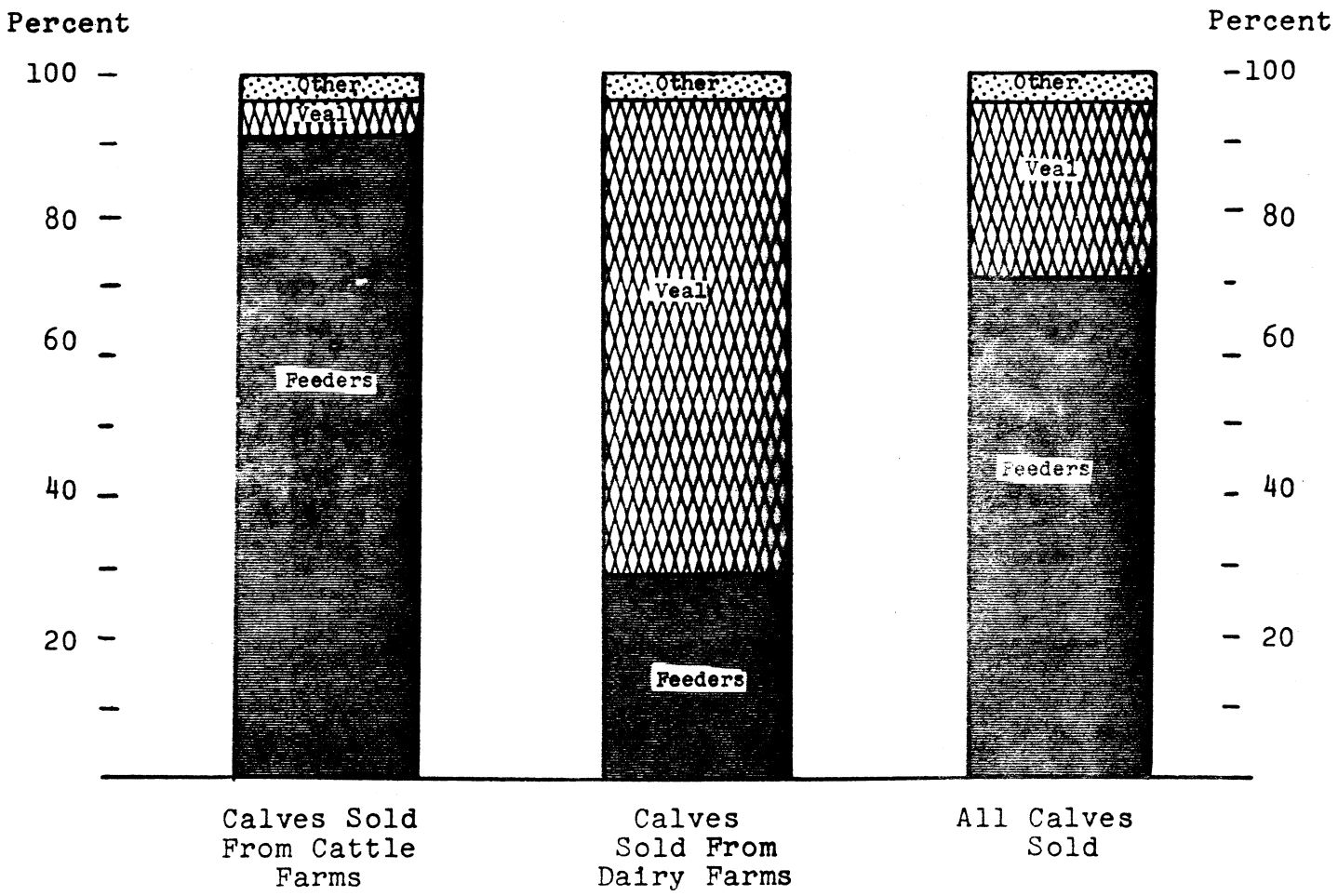

TABLE 8. DISPOSITION OF CALVES SOLD FROM SOUTHEAST OHIO CATTLE FARMS, 1972*

County	Calves Sold				
	Total	For Veal	For Slaughter	For Breeding	As Feeders
Total	86,155	4,268	1,930	1,523	78,434
Adams	6,273	310	141	111	5,711
Athens	1,951	97	44	34	1,776
Belmont	2,340	116	52	42	2,130
Brown	4,878	242	109	86	4,441
Carroll	1,642	81	37	29	1,495
Clermont	2,338	116	52	41	2,129
Coshocton	3,852	191	86	68	3,507
Gallia	3,914	194	83	69	3,563
Guernsey	4,136	205	93	73	3,765
Harrison	1,875	93	42	33	1,707
Highland	7,244	359	162	128	6,595
Hocking	1,102	55	25	19	1,003
Holmes	1,920	95	43	34	1,748
Jackson	4,591	227	103	81	4,180
Jefferson	902	45	20	16	821
Lawrence	1,638	81	37	29	1,491
Meigs	1,794	89	40	32	1,633
Monroe	2,237	111	50	40	2,036
Morgan	2,947	146	66	52	2,683
Muskingum	4,324	214	97	76	3,937
Noble	2,773	137	62	49	2,525
Perry	3,035	150	68	54	2,763
Pike	2,685	133	60	48	2,444
Ross	6,794	337	152	120	6,185
Scioto	2,390	118	54	42	2,176
Tuscarawas	1,858	92	42	33	1,691
Vinton	1,621	80	36	29	1,476
Washington	3,101	154	69	55	2,823

*Distribution of County totals based upon area indices (Table 1)

TABLE 9. DISPOSITION OF CALVES SOLD FROM SOUTHEAST OHIO DAIRY FARMS, 1972*

County	Calves Sold			
	Total	For Veal	For Feeders	As Breeding Stock
Total	41,049	27,684	11,678	1,687
Adams	2,330	1,571	663	96
Athens	1,021	689	290	42
Belmont	2,124	1,432	604	88
Brown	2,218	1,496	631	91
Carroll	2,266	1,528	645	93
Clermont	702	473	200	29
Coshocton	2,434	1,642	692	100
Gallia	963	649	274	40
Guernsey	1,233	833	350	50
Harrison	807	544	230	33
Highland	2,923	1,971	832	120
Hocking	196	132	56	8
Holmes	6,839	4,612	1,946	281
Jackson	436	294	124	18
Jefferson	725	489	206	30
Lawrence	601	405	171	25
Meigs	1,143	771	325	47
Monroe	1,251	844	356	51
Morgan	688	464	196	28
Muskingum	1,420	958	404	58
Noble	659	445	187	27
Perry	624	421	178	25
Pike	407	274	116	17
Ross	902	608	256	38
Scioto	586	395	167	24
Tuscarawas	4,079	2,751	1,160	168
Vinton	319	215	91	13
Washington	1,153	778	328	47

*Distribution of County totals based upon area indices (Table 1).

FIGURE 5. GENETIC BACKGROUND OF FEEDER CALVES SOLD FROM SOUTHEAST OHIO FARMS

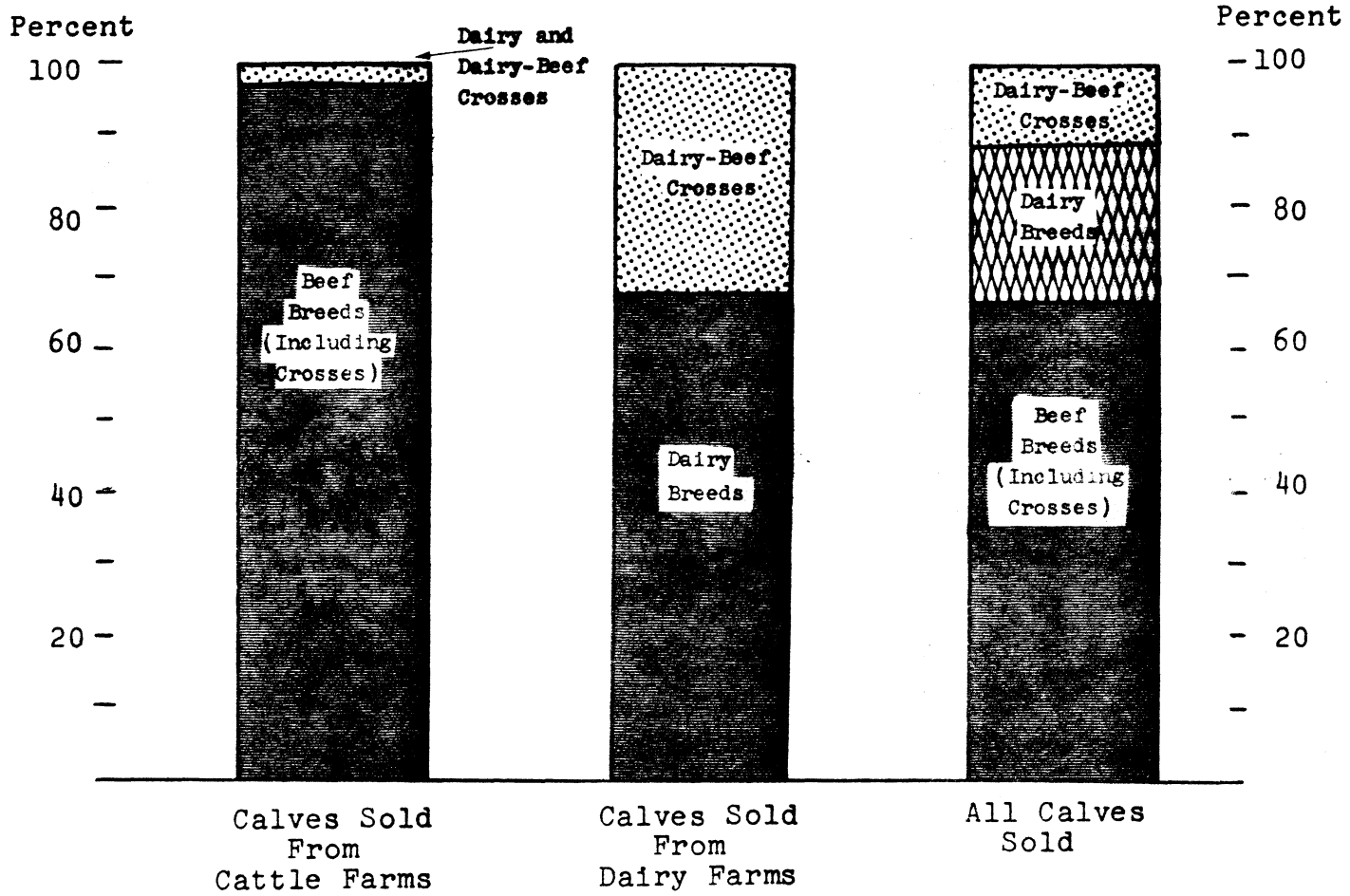

TABLE 10. GENETIC BACKGROUND OF CALVES SOLD FROM SOUTHEAST OHIO CATTLE FARMS, 1972*

County	Total	Beef	Dairy	Beef-Dairy Crosses
Total	86,155	83,864	768	1,523
Adams	6,273	6,106	56	111
Athens	1,951	1,899	17	35
Belmont	2,340	2,278	21	41
Brown	4,878	4,748	44	86
Carroll	1,642	1,598	15	29
Clermont	2,338	2,276	21	41
Coshocton	3,852	3,750	34	68
Gallia	3,914	3,810	35	69
Guernsey	4,136	4,026	37	73
Harrison	1,875	1,825	17	33
Highland	7,244	7,051	65	128
Hocking	1,102	1,073	10	19
Holmes	1,920	1,869	17	34
Jackson	4,591	4,469	41	81
Jefferson	902	878	8	16
Lawrence	1,638	1,594	15	29
Meigs	1,794	1,746	16	32
Monroe	2,237	2,177	20	40
Morgan	2,947	2,869	26	52
Muskingum	4,324	4,209	38	77
Noble	2,773	2,699	25	49
Perry	3,035	2,954	27	54
Pike	2,685	2,614	24	47
Ross	6,794	6,613	61	120
Scioto	2,390	2,327	21	42
Tuscarawas	1,858	1,809	16	33
Vinton	1,621	1,578	14	29
Washington	3,101	3,019	27	55

*Distribution of County totals based upon area indices (Table 1)

TABLE 11. GENETIC BACKGROUND OF CALVES SOLD FROM SOUTHEAST OHIO DAIRY FARMS, 1972*

County	Total	Dairy	Beef-Dairy Crosses
Total	41,049	27,740	13,309
Adams	2,330	1,575	755
Athens	1,021	690	331
Belmont	2,124	1,435	689
Brown	2,218	1,499	719
Carroll	2,266	1,531	735
Clermont	702	474	228
Coshocton	2,434	1,645	789
Gallia	963	651	312
Guernsey	1,233	833	400
Harrison	807	545	262
Highland	2,923	1,975	948
Hocking	196	132	64
Holmes	6,839	4,622	2,217
Jackson	436	295	141
Jefferson	725	490	235
Lawrence	601	406	195
Meigs	1,143	772	371
Monroe	1,251	845	406
Morgan	688	465	223
Muskingum	1,420	960	460
Noble	659	445	214
Perry	624	422	202
Pike	407	275	132
Ross	902	610	292
Scioto	586	396	190
Tuscarawas	4,079	2,757	1,322
Vinton	319	216	103
Washington	1,153	779	374

*Distribution of County Totals based upon area indices (Table 2)

There are several possible reasons why dairymen practice crossbreeding more frequently than cattlemen. Some dairy production specialists feel that dairy heifers bred to beef sires calve more easily than do those bred to dairy bulls. Additionally, these data may indicate that some dairymen plan at least a portion of their calf production for the commercial calf market. Possibly some dairymen find dairy-beef calves have higher value in the veal and/or feeder markets than do those that are dairy breeds only. Thus, they may use beef sires when they do not plan to raise calves for milk production.

To the extent that dairy-beef crossing is an ideal calving strategy for market purposes, dairymen appear to be doing a better job than cattlemen. However, the lack of dairy-beef crossbreeding in cattle operations, despite the opinion of many beef cattle specialists that calving problems are reduced when beef heifers are bred to dairy sires, raises the possibility that calves in which beef breeds predominate yield higher returns than do the dairy-beef crosses.

Beef production specialists generally agree that cross-bred animals are more desirable than single breds in that they reproduce more efficiently, gain faster in the feedlot, and, from the consumer point of view, yield a leaner, more desirable cut of meat. With the possible exception of crossbreeding relating to calving problems, the preferred crosses are among two or more beef breeds rather than between beef and dairy breeds. Thus, the findings in this study are not necessarily inconsistent with the preferences of production specialists and feedlot operators. However, the findings do not confirm that cattlemen in the area are necessarily producing the type of calves that specialists and feeders feel are of highest value. No data were collected to reveal what share of the beef calves marketed were actually beef cross-breds.

Methods of Marketing Feeder Calves

Feeder calves that were sold in the region during 1972 moved through several market channels, including auction markets, direct to feeders by private treaty, dealers and miscellaneous other means (Figure 6 and Tables 12, 13 and 14). Auction markets are by far the most popular marketing method accounting for 86 percent of all feeder calf sales. Only 9 percent are sold by the next most popular method, private treaty, while about 6 percent move through dealers and by other methods.

This marketing pattern is not unexpected given the relatively small average size of calf producers in the area (Table 3). Typically, buyers are concerned with purchasing lots of calves large enough for efficient shipment to feedlots. Usually this means a truckload, or 60 to 85 head depending upon truck capacity. With the small average number of calves produced per farm in this area, buyers would find it difficult to locate large lots on individual farms. Therefore, direct purchasing may not be feasible. Auction

FIGURE 6. METHODS OF MARKETING FEEDER CALVES SOLD FROM SOUTHEAST OHIO FARMS

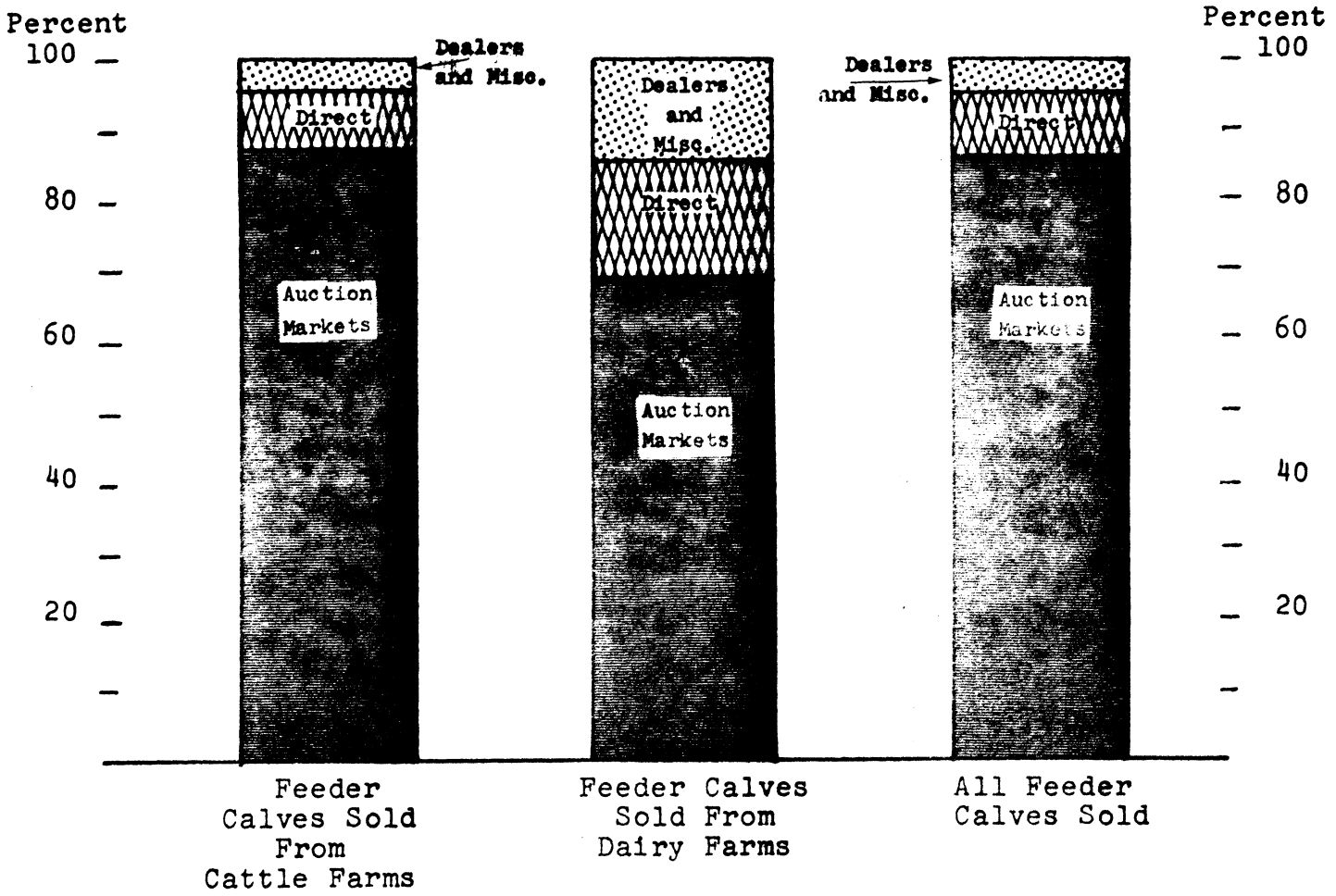

TABLE 12. FEEDER CALVES SOLD FROM ALL SOUTHEAST OHIO FARMS, 1972

County	ALL FEEDER CALVES SOLD			METHOD OF MARKETING		
	Total	From Dairy Farms	From Cattle Farms	Direct to Feeders	Through Auctions	Dealers And Other
Total	90,112	11,678	78,434	8,122	77,308	4,682
Adams	6,374	663	5,711	559	5,500	315
Athens	2,066	290	1,776	188	1,768	110
Belmont	2,734	604	2,130	271	2,295	168
Brown	5,072	631	4,441	454	4,357	261
Carroll	2,140	645	1,495	228	1,764	148
Clermont	2,329	200	2,129	201	2,017	111
Coshocton	4,199	692	3,507	393	3,574	232
Gallia	3,837	274	3,563	324	3,335	178
Guernsey	4,115	350	3,765	352	3,567	196
Harrison	1,937	230	1,707	173	1,666	98
Highland	7,427	832	6,595	657	6,397	373
Hocking	1,059	56	1,003	88	924	47
Holmes	3,694	1,946	1,748	673	2,882	339
Jackson	4,304	124	4,180	346	3,777	181
Jefferson	1,027	206	821	99	867	61
Lawrence	1,662	171	1,491	146	1,435	81
Meigs	1,958	325	1,633	183	1,665	110
Monroe	2,392	356	2,036	221	2,042	129
Morgan	2,879	196	2,683	243	2,505	131
Muskingum	4,341	404	3,937	376	3,756	209
Noble	2,712	187	2,525	228	2,359	125
Perry	2,941	178	2,763	246	2,563	132
Pike	2,560	116	2,444	210	2,239	111
Ross	6,441	256	6,185	525	5,639	277
Scioto	2,343	167	2,176	198	2,037	108
Tuscarawas	2,851	1,160	1,691	332	2,292	227
Vinton	1,567	91	1,476	131	1,367	69
Washington	3,151	328	2,823	277	2,719	155

TABLE 13. METHOD OF MARKETING FEEDER CALVES SOLD FROM SOUTHEAST OHIO CATTLE FARMS, 1972*

County	Total Sold	Direct to Feeders	Through Auctions	Dealers & Other
Total	78,434	6,101	69,279	3,054
Adams	5,711	444	5,045	222
Athens	1,776	138	1,569	69
Belmont	2,130	166	1,881	83
Brown	4,441	345	3,923	173
Carroll	1,495	116	1,321	58
Clermont	2,129	166	1,880	83
Coshocton	3,507	273	3,098	136
Gallia	3,563	277	3,147	139
Guernsey	3,765	293	3,325	147
Harrison	1,707	133	1,508	66
Highland	6,595	513	5,825	257
Hocking	1,003	78	886	39
Holmes	1,748	136	1,544	68
Jackson	4,180	325	3,692	163
Jefferson	821	64	725	32
Lawrence	1,491	116	1,317	58
Meigs	1,633	127	1,442	64
Monroe	2,036	159	1,798	79
Morgan	2,683	209	2,370	94
Muskingum	3,937	306	3,478	153
Noble	2,525	196	2,230	99
Perry	2,763	215	2,440	108
Pike	2,444	190	2,159	95
Ross	6,185	481	5,463	241
Scioto	2,176	169	1,922	85
Tuscarawas	1,691	131	1,494	66
Vinton	1,476	115	1,304	57
Washington	2,823	220	2,493	110

*Distribution of County totals based upon area indices (Table 1)

TABLE 14. METHOD OF MARKETING FEEDER CALVES SOLD FROM SOUTHEAST OHIO DAIRY FARMS, 1972*

County	Total Sold	Direct to Feeders	Through Auction	Dealers and Other
Total	11,678	2,021	8,029	1,628
Adams	663	115	455	93
Athens	290	50	199	41
Belmont	604	105	414	85
Brown	631	109	434	88
Carroll	645	112	443	90
Clermont	200	35	137	28
Coshocton	692	120	476	96
Gallia	274	47	188	39
Guernsey	350	59	242	49
Harrison	230	40	158	32
Highland	832	144	572	116
Hocking	56	10	38	8
Holmes	1,946	337	1,338	271
Jackson	124	21	85	18
Jefferson	206	35	142	29
Lawrence	171	30	118	23
Meigs	325	56	223	46
Monroe	356	62	244	50
Morgan	196	34	135	27
Muskingum	404	70	278	56
Noble	187	32	129	26
Perry	178	31	123	24
Pike	116	20	80	16
Ross	256	44	176	36
Scioto	167	29	115	23
Tuscarawas	1,160	201	798	161
Vinton	91	16	63	12
Washington	328	57	226	45

*Distribution of County totals based upon area indices (Table 2).

markets, on the other hand, afford greater opportunity for buyers to assemble lots of relatively uniform quality calves large enough for efficient transshipment.

It is noted (Table 1) that even the largest cattle farms, those producing over 100 calves annually, do not sell a large share of their feeder calves direct by private treaty, but also depend heavily upon auction markets. This suggests that, while these producers may individually be large enough to attract buyers to their farms, there are so few farms of this size that it isn't practical for buyers to seek them out. Unless the number of large producers in this area increases, direct sales to feeder calf buyers from outside the local area may not be a feasible alternative to auctions. Trends on enterprise size bear watching in the future in order to evaluate the potential for increased direct-to-feeder sales in this region.

The marketing pattern for calves sold from dairy farms is significantly different from that for calves from cattle farms (Tables 13 and 14). Dairymen tend to sell a larger share direct to feeders and others than do cattlemen. This probably reflects the sale of calves that are only a few days old. These are most likely sold locally to farmers who background them up to the 450-750 pound weights suitable for movement into feedlots. Cattlemen, on the other hand, typically raise calves to weights suitable for feedlots prior to weaning. Thus, they have relatively few calves for sale locally that require backgrounding.

Auction Markets

A combined total of 77,308 feeder calves produced in this region moved through auction markets in 1972. There are auction markets for livestock, including calves, in 13 communities in the 28 county area plus one at Lancaster, in Fairfield County, on the perimeter of the area (Figure 7). In two communities, Hillsboro and Zanesville, there are two auctions that handle cattle and calves, bringing to 16 the number of markets serving farmers in this area. At least 14 of these markets sponsor special feeder cattle sales and all handle feeder stock during weekly sales. Of the 14 with special sales, 10 also sponsor Ohio Approved Demonstrational Feeder Calf Sales. Thus, there appear to be a number of auction market alternatives available in the area.

Auction markets in this area undoubtedly attract some feeder cattle from producers located outside the region. Likewise, some feeder calves produced in the region are probably marketed through auctions located outside the area. Assuming these are roughly offsetting, the average movement of feeder calves through an auction market in Southeast Ohio is somewhat less than 5,000 per year. Informal discussions with market operators confirm this

FIGURE 7. CATTLE AUCTION MARKETS IN SOUTHEAST OHIO, 1972

as an average. However, the range appears to vary widely--from a low of 2,000-2,500 to a high of 25,000-30,000.

The minimum throughput for an auction in order to attract sufficient buyers for efficient handling and competitive pricing is difficult to determine. Based upon the costs for assembly and market operations, however, Miller and Henning found the minimum least-cost size to be about 20,000 marketing units, or 40,000 calves, per year.3/ It is recongized that these markets handle other livestock in addition to feeder cattle which help to achieve this minimum utilization rate. Nevertheless, these data raise a concern about whether there are sufficient numbers of feeder cattle being marketed to maintain a reasonably accurate price discovery process at all existing markets.

The density of feeder calf marketing in the study area generally follows the density of calf production (Figure 8). However, feeder marketings are most heavily concentrated in the southwestern counties of the region--mainly Adams, Brown, Highland and Ross--where cattle farms predominate. The large dairy area in the east central portion of the region is the second-most dense area of supply along with Jackson and Gallia counties to the south. A comparison of the market locations (Figure 7) with marketing density (Figure 8) reveals that the markets are fairly well located. There appear to be, however, several markets concentrated in the far eastern portion of the area where feeder marketings are relatively light.

Seasonal Marketing Patterns

Fall marketing is the predominate seasonal pattern practiced in the area (Figure 9 and Tables 15 and 16). This would be anticipated given the prevalance of spring calving (Figure 2). Dairy operators appear to market a significant number of feeder calves in early winter. Most of these are probably fall calves, as dairymen tend to have a larger share of calves born in the fall than do cattlemen.

There are many feeder calves marketed from cattle farms in the early spring. These apparently are yearling animals, since a concurrent percentage of fall calving numbers on cattle farms is not evident. If feed and labor are available for carrying the animal through winter, spring marketing may allow cattlemen to extend the use of these resources and sell somewhat heavier feeder cattle at a time of traditionally short supply. Additionally, the demand

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3/ Miller, Edgar A. and George F. Henning. Suggested Location of Ohio Livestock Markets to Reduce Total Marketing Costs. Ohio Agricultural Research and Development Center Bulletin 981, February, 1966.

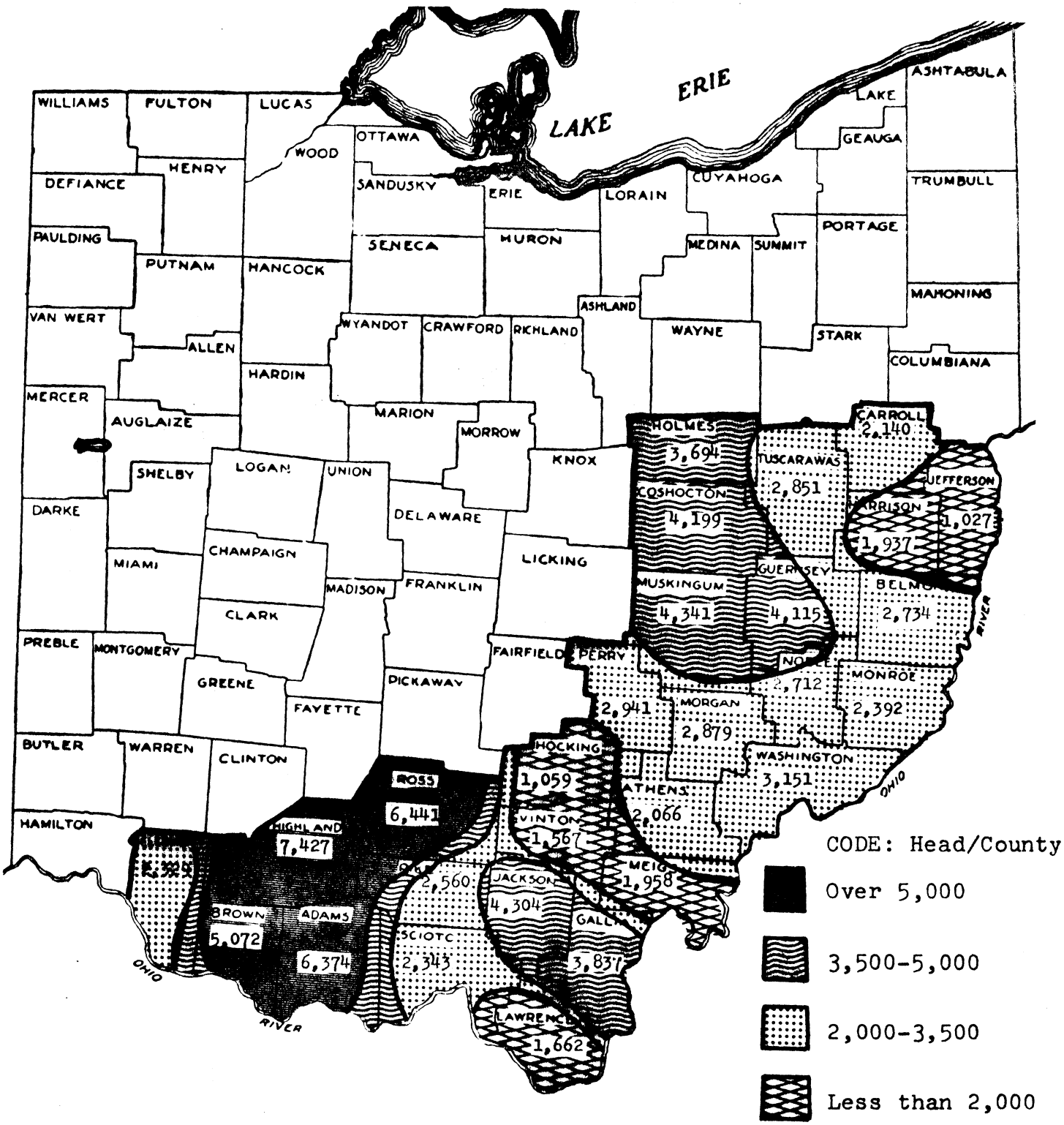

FIGURE 8. DENSITY MAP OF FEEDER CALVES MARKETED FROM SOUTHEAST OHIO FARMS, 1972

FIGURE 9. MONTH FEEDER CALVES MARKETED IN SOUTHEAST OHIO, 1972

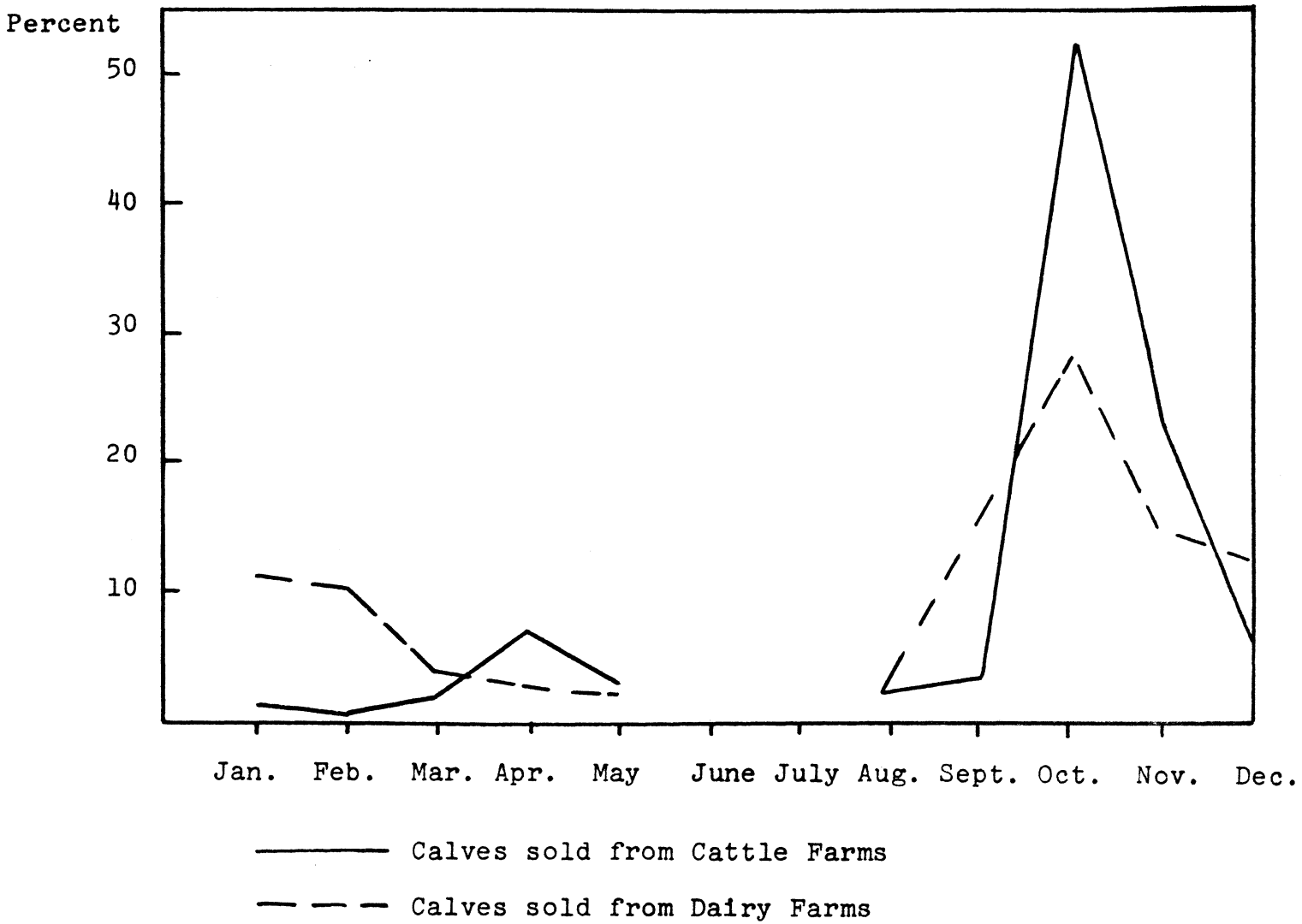

TABLE 15. SEASONAL MARKETING PATTERN OF FEEDER CALVES FROM SOUTHEAST OHIO CATTLE FARMS, 1972*

County	Feeder Calves Sold--All Cattle Farms												
	Total	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total	78,434	808	360	939	5,655	2,292	894	**	1,700	2,690	40,568	17,368	5,160
Adams	5,711	59	26	68	412	167	65		124	196	2,954	1,264	376
Athens	1,776	18	8	21	128	52	20		39	61	919	393	117
Belmont	2,130	22	10	25	154	62	24		46	73	1,102	472	140
Brown	4,441	46	21	53	320	130	51		96	152	2,297	983	292
Carroll	1,495	15	7	18	107	44	17		32	51	773	333	98
Clermont	2,129	22	10	26	154	62	24		46	73	1,101	471	140
Coshocton	3,507	36	16	42	253	102	40		76	120	1,814	777	231
Gallia	3,563	37	16	43	257	104	41		77	122	1,843	789	234
Guernsey	3,765	39	17	45	271	110	43		82	129	1,947	834	248
Harrison	1,707	18	8	20	123	50	19		37	59	883	378	112
Highland	6,595	68	30	79	476	193	75		143	226	3,411	1,460	434
Hocking	1,003	10	5	12	72	29	11		22	35	519	222	66
Holmes	1,748	18	8	21	126	51	20		38	60	904	387	115
Jackson	4,180	43	19	50	301	122	48		91	143	2,162	926	275
Jefferson	821	8	4	10	59	24	9		18	28	425	182	54
Lawrence	1,491	15	7	18	108	44	17		32	51	771	330	98
Meigs	1,633	17	7	20	118	48	19		35	56	845	361	107
Monroe	2,036	21	9	24	147	60	23		44	70	1,053	451	134
Morgan	2,683	28	12	32	193	78	31		58	92	1,388	594	177
Muskingum	3,937	41	18	47	284	115	45		85	135	2,036	872	259
Noble	2,525	26	12	30	182	74	29		55	86	1,306	559	166
Perry	2,763	28	13	33	199	81	31		60	95	1,429	612	182
Pike	2,444	25	11	30	176	71	28		53	84	1,264	541	161
Ross	6,185	64	28	74	446	181	71		134	212	3,199	1,369	407
Scioto	2,176	22	10	26	157	64	25		47	75	1,125	482	143
Tuscarawas	1,691	18	8	20	122	49	19		37	58	875	374	111
Vinton	1,476	15	7	18	106	43	17		32	51	763	327	97
Washington	2,823	29	13	34	204	82	32		61	97	1,460	625	186

*Distribution of County totals based upon area indices (Table 1).
**Survey responses and/or population base did not include significant data.

TABLE 16. SEASONAL MARKETING PATTERN OF FEEDER CALVES FROM SOUTHEAST OHIO DAIRY FARMS, 1972*

	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total	11,678	1,237	1,237	394	280	**	224	109	**	1,796	3,200	1,740	1,461
Adams	663	70	70	22	16		13	6		102	182	99	83
Athens	290	31	31	10	7		6	3		44	79	43	36
Belmont	604	64	64	20	14		12	6		93	165	90	76
Brown	631	67	67	21	15		12	6		97	173	94	79
Carroll	645	68	68	22	15		13	6		99	177	96	81
Clermont	200	21	21	7	5		4	2		31	54	30	25
Coshocton	692	73	73	23	17		13	7		106	190	103	87
Gallia	274	29	29	9	7		5	3		42	75	41	34
Guernsey	350	37	37	12	8		7	3		54	96	52	44
Harrison	230	24	24	8	6		4	2		35	64	34	29
Highland	832	88	88	28	20		16	8		128	228	124	104
Hocking	56	6	6	2	1		1	1		9	15	8	7
Holmes	1,946	207	207	66	47		37	17		299	533	290	243
Jackson	124	13	13	4	3		2	1		20	34	19	15
Jefferson	206	22	22	7	5		4	2		32	55	31	26
Lawrence	171	18	18	6	4		3	2		27	47	25	21
Meigs	325	34	34	11	8		6	3		50	89	49	41
Monroe	356	37	37	12	9		7	3		55	98	53	45
Morgan	196	20	20	7	5		4	2		30	54	29	25
Muskingum	404	43	43	13	9		8	4		62	111	60	51
Noble	187	20	20	6	4		4	2		29	51	28	23
Perry	178	19	19	6	4		3	2		27	49	27	22
Pike	116	12	12	4	3		2	1		18	32	17	15
Ross	256	27	27	9	6		5	2		39	71	38	32
Scioto	167	18	18	6	4		3	2		26	45	25	22
Tuscarawas	1,160	124	124	39	28		22	9		178	318	173	145
Vinton	91	10	10	3	2		2	1		14	25	13	11
Washington	328	35	35	11	8		6	3		50	90	49	41

*Distribution of County totals based upon area indices (Table 2).
**Survey responses and/or population base did not include significant data.

for feeder cattle in the spring appears to be growing as the newer large feedlots develop year-around production patterns. In this respect it is of interest that the largest cattle operators have the highest percentage of feeder cattle marketed in the spring, indicating that these large, single enterprise cattle producers are finding the spring feeder market to be economically feasible and rewarding.

APPENDIX

Methodology and Procedures

The population of calves and calf producers in the 28 county study area was derived from the data reported in the 1969 Census of Agriculture for each county. The number of producers was considered to be the number of farms reporting an inventory of cows and heifers that have calved. The number of dairy cows was taken directly from the census report and the number of beef brood cows was considered to be the residual of all cows and heifers that have calved minus the number of dairy cows. The inventory of cow numbers reported in the 1969 Census was that which existed on December 31, 1969. For purposes of this study, that inventory was considered to be the same as the January 1, 1970 inventory.

The January 1, 1970 inventory of cows was updated to reflect the 1972 population based upon data reported by the Ohio Crop Reporting Board in Ohio Agricultural Statistics for 1970, 1971 and 1972. The percent change in the number of milk cows and heifers that have calved in inventory on farms in each county between January 1, 1970 and January 1, 1973 was calculated. The 1969 Census data on dairy cow numbers were then adjusted by this percentage to determine the 1972 population. The January 1 inventories of milk cows and heifers that have calved were subtracted from the number of all cows and calves on farms in each county for both 1970 and 1973 as reported by the Crop Reporting Board. The percentage change between those two dates in the remainder was calculated and that percentage was then used to adjust the 1969 Census data on beef brood cows to determine the 1972 herd size. Calf production was calculated based upon an average 87 percent calf crop. It is this total population that is reported in Table 3, p. 11 of this report.

The characteristics of calf production and marketing were determined by a survey of producers. Two questionnaires were designed, one for dairy farmers and the second for cattlemen, to secure this information. These questionnaires were mailed to a total of 1305 producers in the area, or eight percent of the total population. Names were selected by a random sampling process from lists of producers maintained by the county extension agent in each of the 28 counties. Useable responses were received from 178 producers.

A comparison of the size of the respondents in terms of calf production with the census data revealed that the responses were skewed toward the larger operations. This made it necessary to adjust the survey results in a manner that would generate consistency with the size distribution of the population. To make this adjustment the percent of the total population in each of four size categories was determined from the Census data. These categories were 1-19, 20-49, 50-99, and 100+ calves per farm. The percentage of the

total number of calves reported by the survey respondents were then determined for each of the four categories. Indices were calculated for each size category based upon the ratio of the percentage of the total population to the percentage of the sample responses in each category. The actual survey responses in each size category were adjusted by these indices, generating survey results that were consistent with the size distribution of the population.

The adjusted survey results were used to calculate indices of calf production and distribution as shown in Table 1, pp. 7 and 8, and Table 2, pp. 9 and 10 in the text. The remainder of the data in this report, with the exception of the information on auction market locations (Figure 7, p. 30), was computed by applying the indices in Tables 1 and 2 to the population information in Table 3. The data on auction markets were developed from the auction market license information on file with the Markets Division of the Ohio Department of Agriculture.